

## 1997 SURVEY, NURSERY AND FIELD INSPECTION SUMMARY

**\*APPLE MAGGOT (AM)** (*Rhagoletis pomonella* (Walsh)) - One positive and two tentatively positive trap sites were reported this year. We have a sentinel site on native hawthorn in Boise County, which is far removed from any commercial fruit production that had routinely caught a dozen or so AM every year for the past several years. This site is not within either quarantine zones. This year 74 traps were placed in seven counties in and around the commercial apple production areas of each county. A total of 101 traps were placed at 101 sites in commercial cherry orchards in Canyon, Gem, and Payette counties for a European & Western Cherry Fruit Fly survey. They were also checked for apple maggot (A total of 175 traps were checked for apple maggot). Two positive trap sites were found. One each in Gem and Payette counties, within the quarantined areas. These two sites were found late in the season and are being investigated as to positive identification and the feasibility of eradication. There is some possibility that these may be the snowberry maggot (*Rhagoletis zephyria*) and since no genitalia dissections were performed the apple maggot identification is tentative.

**\*BEET NECROTIC YELLOW VEIN VIRUS** (*Rhizomania*) – Infested fields were found for the first time in Elmore (5 fields), Owyhee (2 fields), Payette (2 fields), and Gooding (2 fields) Counties. An additional 27 fields were found to be positive in seven counties. They break down as follows: Canyon - 1, Washington – 11, Twin Falls – 6, Jerome –1, Bingham – 3, Power – 4, Minidoka – 1. The survey is carried out in cooperation with the Amalgamated Sugar Company through aerial surveys, ground verification, and laboratory ELISA testing of suspect root tissue. A detailed listing of positive field sites can be found on the Department of Agriculture World Wide Web home page whose address is listed at the end of this report.

**\*CEREAL LEAF BEETLE (CLB)** (*Oulema melanopus*) - Active infestations of the cereal leaf beetle were detected for the first time in 1992, in Franklin County south of Preston, in southeastern Idaho. Surveys in 1997 of 155 wheat, barley, or oat fields and a few roadside grass surveys in 32 counties in the state were carried out. A minimum of four to five fields per county were surveyed. Detections were made in five counties for the first time this year (Boise, Canyon, Elmore, Gooding and Lincoln counties). The infestations in the new counties are very isolated and population levels are very low. Two larval parasite releases and one egg parasite release were made at a dairy farm in western Ada County this year. Parasite recoveries and additional releases will be made next year. [A map showing Idaho counties positive for CLB is attached.](#)

**CHRYSANTHEMUM WHITE RUST (CWR)** (*Puccinia horiana*) - The Bureau investigated one alleged incident of CWR at a Burley florist/greenhouse. The company had received cuttings from a Florida operation alleged to be the source of diseased chrysanthemums found in retail outlets and greenhouses in Washington and Oregon. No CWR infected plants were found in the Burley facility and it was checked frequently October through December.

**EUROPEAN CHERRY FRUIT FLY (ECFF)** (*Rhagoletis cerasi*) - A total of 101 traps were placed at 101 sites in commercial cherry orchards in Canyon, Gem, and Payette counties. Apple maggot-type sticky traps with an ammonium carbonate bait were used. All traps were negative. This program was carried out under an USDA grant to survey for exotic pests not known to occur in the U.S. These traps were also checked for apple maggot.

**\*EUROPEAN PINE SHOOT MOTH (EPSM)** (*Rhyacionia buoliana* (Denis & Schiffermüller)) - Infestations are known to exist in Ada, Canyon, Elmore, Gem, Gooding, Kootenai, Latah, Lincoln, Nez Perce, Owyhee, and Twin Falls counties as determined by surveys performed over the past few years. In 1997, detection surveys were carried out in 14 counties in the state. Trap sites were selected at each inspector's discretion based upon risk, accessibility, and presence of suitable host material or at the request of an exporting nursery. There were 72 traps placed at 38 sites in 14 counties. New positive sites were found in Blaine, Cassia, and Minidoka counties. This survey is performed to track EPSM's movement within the state for compliance with California, and Oregon quarantines. [A map showing Idaho counties positive for EPSM is attached.](#) The Idaho European Pine Shoot Moth Quarantine is in the process of being repealed.

**\*GYPSY MOTH (GM)** (*Lymantria dispar*) – Detection Trapping – In 1997 the cooperating agencies in the Idaho gypsy moth detection program placed 5,086 detection traps throughout the state. Pheromone baited traps were placed on a grid basis at a density of four traps per square mile. Traps were placed throughout the state in cities and towns and the surrounding urban areas and rural communities in accordance with a predetermined rotation schedule. Cities and communities where 20 or more move-ins occur are trapped irrespective of their place in the schedule. A move-in is defined as an individual or family moving from a state that is generally infested with gypsy moths. This information is derived from vehicle registration information supplied by the Idaho Department of Transportation. Most infestations are initiated when an egg mass or other life state of the gypsy moth arrives on an outdoor household article brought by someone moving into the area. Between May 1996 and April 1997, there were 3478 move-ins to the state. Campgrounds, tourist attractions, and other high-risk locations were also trapped. No gypsy moths were caught in detection traps in 1997. Delimitation Trapping – In 1997 delimitation traps were placed in Post Falls surrounding the site where a single gypsy moth was caught in a detection trap in 1995. No moths were caught. There will be no delimitation trapping in Idaho next year. The Idaho Department of Lands administers this trapping program. A more detailed report may be obtained by contacting Mr. Lad Livingston, Idaho Department of Lands, 701 River Ave., Coeur D’Alene, Idaho 83816, Phone (208) 769-1525.

**\*GRASSHOPPER / MORMON CRICKETS** - Rangelands in the southern half of the state was surveyed from the Salmon river south through Adam, Washington, Payette, Owyhee counties, and along the snake river plains and drainage areas to Fremont County and the Wyoming border, including the mountainous area around Custer County. A total of 316,400 acres in 17 counties was found to be infested at rates of 8+ grasshoppers per square yard. A further 2,036,000 acres was found to be infested at rates of 3 to 7 grasshoppers per square yard. A county breakdown follows:

<b>Grasshopper Infestations at 8+ per sq. yd.</b>						<b>3-7 per sq. yd.</b>
<b>County</b>	<b>Total Acres</b>	<b>Private Acres</b>	<b>State Acres</b>	<b>BLM Acres</b>	<b>Forest Service Acres</b>	<b>Total Acres</b>
<b>ADA</b>	28,000	2,300	1,500	3,500		<b>150,000</b>
<b>ADAMS</b>	18,000	9,000	1,000	8,000		<b>200,000</b>
<b>BANNOCK</b>	3,000	1,000	500	1,500		<b>10,000</b>
<b>CAMAS</b>	1,000			1,000		<b>10,000</b>
<b>CANYON</b>	10,000	7,000		3,000		<b>5,000</b>
<b>CARIBOU</b>	18,000	12,000	1,000	5,000		<b>50,000</b>
<b>CASSIA</b>	10,000	1,000	1,000	8,000		<b>100,000</b>
<b>CUSTER</b>	1,200	600		600		<b>4,000</b>
<b>ELMORE</b>	20,000	3,000	1,500	15,500		<b>70,000</b>
<b>FREMONT</b>	30,000	12,000	4,000	10,000	4,000	<b>195,000</b>
<b>GEM</b>	42,000	25,000	2,000	15,000		<b>130,000</b>
<b>GOODING</b>	10,000	1,000		9,000		<b>50,000</b>
<b>ONEIDA</b>	8,000	2,000	1,000	5,000		<b>55,000</b>
<b>OWYHEE</b>	1,200	200		1,000		<b>12,000</b>
<b>PAYETTE</b>	25,000	6,000	1,000	18,000		<b>165,000</b>
<b>TWIN FALLS</b>	11,000	1,000		6,000	4,000	<b>130,000</b>
<b>WASHINGTON</b>	80,000	50,000	1,500	28,500		<b>700,000</b>

<b>TOTALS</b>	<b>316,400</b>	<b>153,800</b>	<b>16,000</b>	<b>138,600</b>	<b>8,000</b>	<b>2,036,000</b>
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**Counts of 8+ grasshoppers per sq. yd. are considered significant.**

**This survey represents a significant increase in grasshopper densities and afflicted areas from the 1996 survey.**

**\*JAPANESE BEETLE (JB)** (*Popillia japonica* Newman) - Traps were placed at many of the larger nurseries across the state that were known to handle large quantities of container and/or balled and burlap nursery stock, as well as recently landscaped properties, such as commercial office parks, golf courses, and apartment complexes. There were 207 traps placed in 207 sites in 39 counties statewide. Traps were placed the last week of June and picked up during the last week of September or first week of October. All traps were checked every two weeks. Trapping was carried out on a site selection basis by Plant Industry inspectors with emphasis being placed on nurseries, golf courses, office parks and apartment complexes. Some homeowner sites that imported zoysia grass from Maryland were also trapped. One positive detection was made in Wendell (Gooding County). That homeowner had two separate purchases of zoysia grass plugs in the spring. The homeowner had also recently planted some bare root fruit trees. Plans for 1998 include delimit trapping of the area around the Wendell find and trapping of all sites that received zoysia grass plugs on the same phytosanitary certificate as the Wendell homeowner. We expect to place in excess of 400 traps next year to get a handle on this situation, in addition to the number of traps normally placed.

**\*KARNAL BUNT (KB)** (*Tilletia indica*) - This survey is part of an USDA sponsored national survey. Idaho is required to take 471 grain samples. Samples are apportioned out according to wheat production in a particular county. All of the grain samples were collected and analyzed according to USDA national survey standards. In Boise, Lemhi and Shoshone counties no wheat could be found to be sampled. All sample results are being entered into the National Agricultural Pest Information System (NAPIS) on an individual basis. A list of samples taken per county is attached. This is the second year of the survey and we have had a more difficult time this year getting cooperation of the elevators making it very likely that we will come up short of the required 471 grain samples. However, seed samples from the Idaho State Seed lab will be used to make up the difference. If this survey is continued into 1998, we expect to have a very difficult time collecting the required number of samples as long as the program remains a voluntary one.

**LESSER APPLEWORM (LAW)** (*Cydia prunivora*) and **ORIENTAL FRUIT MOTH (OFM)** (*Grapholita molesta*) - During the 1996 trapping season we had been undertaking some (OFM) surveys in Boundary County to support some Canadian export activities by the nursery industry in that area. We began catching large numbers of a particular moth in the OFM traps that were not OFM. The numbers of moths being caught was large enough to preclude it being an accidental encounter with the trap. Samples were sent to the Yakima Agricultural Research Lab in Wapato, Washington, and determined to be Lesser Appleworm. This is the first detection of this insect in the State of Idaho, as far as we know. The Yakima lab told us the Oriental Fruit Moth pheromone would attract Lesser Apple Worm if certain components of the pheromone were stronger than others. LAW has been detected in nine counties in Washington and two counties in Oregon, in the past. During the summer of 1997, we cooperated with the ARS Yakima Research Center by having paired placements of both OFM baited and LAW baited traps. The traps were baited with lures whose component ratios were adjusted to be more attractive to one or the other LAW and OFM. Five traps of each type were placed at each of five different sites. The traps both seemed to perform equally well in attracting LAW, but no OFM were trapped in any of the traps.

**Light Brown Apple Moth (LBAM)** (*Epiphyas postvittana*) Commercial apple orchards in Canyon, Gem, Owyhee, Payette and Washington counties. A total of 105 traps were placed at 105 sites in the three counties. Pherocon 1C traps were used. All traps were negative. This program was carried out under an USDA grant to survey for exotic pests not known to occur in the U.S.

**\*MEDITERRANEAN FRUIT FLY (MFF)** (*Ceratitis capitata*) - This survey is carried out as part of an export program for the shipment of apples to the Peoples Republic of China. Two commercial apple producers registered for the program and 64 traps were placed in three counties where the producers have eligible orchards. The traps were placed at a rate of one per 250 acres of orchard and perimeter trapping at a rate of one per square kilometer of existing host material around each orchard. Three traps were placed within each packing facility and all traps were serviced monthly. Field traps were kept in place from April through harvest and the facility traps were maintained year-round. No fruit flies were detected.

**PEAR LEAF BLISTER MOTH (PLBM)** (*Leucoptera malifoliella*) Commercial apples in Canyon, Gem, Owyhee, Payette and Washington counties. A total of 110 traps were placed at 110 sites in the five counties. Pherocon 1C traps were used and all traps were negative. This program was carried out under an USDA grant to survey for exotic pests not known to occur in the U.S.

**WALNUT HUSK FLY (WHF)** (*Rhagoletis completa*). Traps placed for AM and ECFF and were also checked for the presence of WHF 68 traps were placed in six counties (Ada, Boise, Canyon, Gem, Payette, and Washington) in and around the commercial apple production areas of each county. A total of 101 traps were placed at 101 sites in commercial cherries in Canyon, Gem, and Payette counties for a European & Western Cherry Fruit Fly survey. Traps were also checked WHF (A total of 169 traps were checked for WHF). Two positive trap sites were found, one each in Boise and Canyon counties. This pest is known to be endemic within the areas surveyed.

#### ***DISEASES AND PESTS FOUND DURING 1997 FIELD INSPECTIONS FOR EXPORT CERTIFICATION***

- **Alfalfa** - Alfalfa Mosaic Virus was observed in fields totaling 232 acres. Canada thistle was observed in fields totaling 1,253 acres. Dodder was found in fields totaling 251 acres. Spring blackstem (*Phoma* spp.) was observed in fields totaling 308 acres. All of the above disease observances were in the Treasure Valley.
- **Beans** - Bacterial brown spot was observed and confirmed in the laboratory from 47 fields totaling 1,618 acres. Halo blight (*Pseudomonas syringae* pv. *phaseolicola*) was observed and confirmed in a four-acre trial ground in the Treasure Valley. No other bean fields in the valley were positive for any of the bacterial blight diseases. Thirty-nine of the forty-seven fields positive for Brown spot were destroyed. The four acres of trial grounds positive for Halo blight were also destroyed. Fields totaling 63 acres were found positive for Alfalfa mosaic virus. A total of 95 acres were found positive for Bean common mosaic virus.
- **Corn** - High plains virus was observed and confirmed in fields totaling 78.5 acres. A total of 317 and 628 acres were found positive for Head smut and Common smuts respectively. *Fusarium* spp. was observed in fields totaling 171 acres. All fields found positive for *Fusarium* spp. and High plains virus were located in the Treasure Valley.
- **Lettuce** - Five fields totaling 19 acres were found positive for Lettuce mosaic virus. No fields had an infection rate of over 1 percent. All lettuce fields were located in the Treasure Valley.
- **Mint** - Twenty-seven acres (all in the Treasure Valley) involving 3 fields were found positive for Verticillium wilt (*Verticillium dahliae*). A total of 391 acres were found infested with Mint root borer (*Fumibotys fumalis*). Fields were sampled in September and early October (3 square foot samples per 5 acres or less) for Mint root borer.
- **Peas** - Bacterial blight of pea (*Pseudomonas syringae* pv. *pisi*.) was observed in fields totaling 227 acres (all in the Magic Valley). Alfalfa mosaic virus was observed in fifty acres in the Treasure Valley. *Ascochyta* was observed in one eight-acre field in the Treasure Valley.

### ***PLANT PATHOLOGY LABORATORY SAMPLE SUMMARY***

The laboratory received 1,523 samples requiring 3,135 tests. The average turn-around time was 13 days per sample. Turn-around time for positive bean samples averaged 53 days versus 21 days for negative samples.

<b>CROP</b>	<b>NUMBER OF SAMPLES</b>	<b>NUMBER OF TESTS</b>
<b>BEANS</b>	258	1290
<b>PEAS</b>	22	22
<b>SEEDS</b>	81	104
<b>SUGAR BEETS</b>	148	148
<b>POTATOES</b>	12	36
<b>WHEAT</b>	601	607
<b>MISC. FIELD CROPS</b>	401	928
<b>YEAR TOTALS</b>	<b>1523</b>	<b>3135</b>

### **Number of Fields and Acreage's Submitted for Inspections Under the Idaho Rules for Phytosanitary and Post-Entry Certification and Bacterial Diseases of Beans for the 1996 Field Season**

<b>Species</b>	<b># Fields</b>	<b>Submitted Acres</b>	<b>Inspected Acres</b>
<b>Alfalfa</b>	278	4922.72	4877.72
<b>Barley</b>	9	199.0	199.00
<b>Beans, Dry</b>	272	5364.6	12594.30
<b>Beans, Garden</b>	1575	25817.2	57851.6
<b>Cantaloupe</b>	5	12.5	25
<b>Carrot</b>	75	487	487
<b>Chive</b>	8	52.25	52.25
<b>Corn</b>	876	7513.41	14145.57
<b>Cress</b>	1	10	10
<b>Cucumber</b>	3	3.75	7.5
<b>Garlic</b>	1	0.10	0.10
<b>Hops</b>	17	582	582
<b>Leek</b>	3	9.5	9.5
<b>Lettuce</b>	60	408	408
<b>Mint</b>	73	1196.2	2587.4
<b>Onion</b>	84	577.36	577.41
<b>Peas</b>	463	10135.3	19682.9
<b>Pepper, Bell</b>	5	2	2
<b>Pumpkin</b>	1	0.30	0.30
<b>Radish</b>	12	99	99
<b>Red Clover</b>	16	426	426
<b>Squash</b>	1	1.2	1.2
<b>TOTALS</b>	<b>3838.00</b>	<b>57819.39</b>	<b>114627.75</b>

## ***EXPORT CERTIFICATIONS FOR THE 1997 CALENDAR YEAR***

The Bureau issued 3,638 Federal and 2,531 State phytosanitary certificates for 79 different types of commodities to 108 countries. 284,771,095 pound of seed, and other commodities were certified.

### ***NURSERY INSPECTIONS FOR COMPLIANCE WITH THE IDAHO NURSERY LAW TITLE 22, CHAPTER 23 IDAHO CODE***

In 1997 there were 1,364 licensed nurseries and 819 of those were inspected for compliance with the Nursery and Florists law and the presence of plant pests and noxious weeds. In addition, specific checks were made for compliance with various state laws or quarantines or pests of particular concern the results are listed below.

<b>Quarantine / Pest(s)</b>	<b>No. Inspections</b>	<b>Incidents</b>	<b>Stop Sales</b>	<b>Corrective Action</b>
Certified Seed Potatoes	117	3	3	
Japanese Beetle Quarantine	295			
Pine Shoot beetle	258			
Noxious Weeds	484	12		12
Aphids	591	48		22
Onion White Rot Quarantine	182	8	8	
European Pine Shoot Moth	256	6		6
Grape Quarantine	122			
Gypsy Moth	311			
Idaho Seed Law	360			
European Corn Borer	307	2	4	1
Mint Quarantine	152			
Peach Tree Quarantine	135			
Red Imported Fire Ant	311			
Nematodes	4			
General Pests	819	55	11	21
<b>Totals</b>	<b>4704</b>	<b>134</b>	<b>26</b>	<b>62</b>

This report and previous year's reports, as well as, pest distribution maps, laws, rules, press releases, and various forms can be found on the Department's Web home page.

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Denotes that the survey was totally or partially funded by a state deficiency warrant.